Nevada Department of Conservation and Natural Resources • Division of Environmental Protection

Bureau of Air Pollution Control

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Facility ID No. A0386 DRAFT Permit No. AP1041-2256

MERCURY OPERATING PERMIT TO CONSTRUCT: PHASE 2

Issued to: Florida Canyon Mining, Inc. (HEREINAFTER REFERRED TO AS ***THE PERMITTEE***)
Mailing Address: P.O. BOX 330; IMLAY, NEVADA 89418
Physical Address: INTERSTATE 80 EXIT 138 IMLAY, NEVADA 89418
General Facility Location: SECTIONS 1-3 AND 10-14 OF T31N, R33E, MDB&M
SECTION 34 AND 35 OF T32N, R33E
(HA 72 IMLAY AREA BASIN) (PERSHING COUNTY)
NORTH 4,493.01 KM, EAST 393.74 KM, UTM ZONE 11 (NAD 83)

Thermal Unit List: (1 Thermal Unit)		
A. System 01 – Carbon Kiln		
TU	4.001	Carbon Kiln

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Section I. General Conditions

The Permittee must comply with, but is not limited to, all conditions of Nevada Administrative Code (NAC) 445B.3611-3689 *"Nevada Mercury Air Emissions Control Program"*, inclusive.

A. Records Retention. NAC 445B.3679.2(a)
The Permittee of a Mercury Operating Permit to Construct shall retain records of all required monitoring data and support information for (5) years after the date of the sample collection, measurement, report or analysis. Supporting information includes, without limitation, all records regarding calibration and maintenance of the monitoring equipment and all original strip-chart recordings for continuous monitoring instrumentation.

B. Severability. NAC 445B.3679.2(b)
Each of the conditions and requirements of the Mercury Operating Permit to Construct is severable and, if any are held invalid, the remaining conditions and requirements continue in effect.

C. Compliance/Noncompliance. NAC 445B.3679.2(c)
The Permittee must comply with all conditions of the Mercury Operating Permit to Construct. Any noncompliance constitutes a violation and is grounds for:
1. An action for noncompliance;
2. The revoking and reissuing, or the terminating of the Mercury Operating Permit to Construct by the Director; or
3. The reopening or revising of the Mercury Operating Permit to Construct by the holder of the Mercury Operating Permit to Construct as directed by the Director.

D. Defense to Noncompliance. NAC 445B.3679.2(d)
The need to halt or reduce activity to maintain compliance with the conditions of the Mercury Operating Permit to Construct is not a defense to noncompliance with any conditions of the Mercury Operating Permit to Construct.

E. Cause. NAC 445B.3679.2(e)
The Director may revise, revoke and reissue, reopen and revise, or terminate the Mercury Operating Permit to Construct for cause.

F. Property Rights/Exclusive Privilege. NAC 445B.3679.2(f)
The Mercury Operating Permit to Construct does not convey any property rights or any exclusive privilege.

G. Information Request from Director. NAC 445B.3679.2(g)
The Permittee shall provide the Director, in writing and within a reasonable time, with any information that the Director requests to determine whether cause exists for revoking or terminating the Mercury Operating Permit to Construct or to determine compliance with the conditions of this Mercury Operating Permit to Construct.

H. Right to Entry. NAC 445B.3679.2(h)
The Permittee shall allow the Director or any authorized representative of the Director, upon the presentation of credentials, to:
1. Enter upon the premises of ***the Permittee*** where:
   a. The thermal unit that emits mercury is located;
   b. Activity related to mercury emissions is conducted; or
   c. Records are kept pursuant to the conditions of the Mercury Operating Permit to Construct.
2. Have access to and copy, during normal business hours, any records that are kept pursuant to the conditions of the Mercury Operating Permit to Construct;
3. Inspect, at reasonable times, any facilities, practices, operations, or equipment, including any equipment for monitoring or controlling air pollution, that are regulated or required pursuant to the Mercury Operating Permit to Construct; and
4. Sample or monitor, at reasonable times, substances or parameters to determine compliance with the conditions of the Mercury Operating Permit to Construct or applicable requirements.

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Section I. General Conditions (continued)

I. Certify True and Accurate. NAC 445B.3679.2(i)
A responsible official of the stationary source shall certify that, based on information and belief formed after reasonable inquiry, the statements made in any document required to be submitted by any condition of the Mercury Operating Permit to Construct are true, accurate and complete.

J. Yearly Reporting. NAC 445B.3679.3(b)(c)(d)
The Permittee will submit yearly reports including, but not limited to, throughput, production, fuel consumption, hours of operation, emissions and mercury co-product. These reports will be submitted on the form provided by the Bureau of Air Pollution Control for all emission units/systems specified on the form. The completed form must be submitted to the Bureau of Air Pollution Control no later than March 1 annually for the preceding calendar year, unless otherwise approved by the Bureau of Air Pollution Control.

K. Facilities Operation. NAC 445B.227
The Permittee may not:
1. Operate a stationary source of air pollution unless the control equipment for air pollution that is required by applicable requirements or conditions of the Mercury Operating Permit to Construct are installed and operating.
2. Disconnect, alter, modify or remove any of the control equipment for air pollution or modify any procedure required by an applicable requirement or condition of the Mercury Operating Permit to Construct.

L. Excess Emissions. NAC 445B.232
1. Scheduled maintenance or testing or scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive, must be approved by the Director and performed during a time designated by the Director as being favorable for atmospheric ventilation.
2. The Director must be notified in writing of the time and expected duration at least 24 hours in advance of any scheduled maintenance which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive.
3. The Director must be notified in writing or by telephone of the time and expected duration at least 24 hours in advance of any scheduled repairs which may result in excess emissions of regulated air pollutants prohibited by NAC 445B.001 to 445B.3689, inclusive.
4. The Director must be notified of any excess emissions within 24 hours after any malfunction or upset of the process equipment or equipment for controlling pollution or during startup or shutdown of such equipment. The telephone number for the notification is (775) 687-9350.
5. ***The Permittee***, as the owner or operator of an affected facility, shall provide the Director, within 15 days after any malfunction, upset, startup, shutdown, or human error which results in excess emissions, sufficient information to enable the Director to determine the seriousness of the excess emissions. The information must include at least the following:
   a. The identity of the stack or other point of emission, or both, where the excess emissions occurred.
   b. The estimated magnitude of the excess emissions expressed in units of the applicable limitation on emission and the operating data and methods used in estimating the magnitude of the excess emissions.
   c. The time and duration of the excess emissions.
   d. The identity of the equipment causing the excess emissions.
   e. If the excess emissions were the result of a malfunction, the steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunction.
   f. The steps taken to limit the excess emissions.
   g. Documentation that the equipment for controlling air pollution, process equipment, or processes were at all times maintained and operated, to a maximum extent practicable, in a manner consistent with good practice for minimizing emissions.

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Section I. General Conditions (continued)

M. Construction Requirements. NAC 445B.250

1. Early Reduction Credit (ERC), New, or Modified Thermal Units
   The *Permittee* shall provide the Director written notification of:
   a. The date that construction or reconstruction of an affected facility is commenced, postmarked no later than 30 days after such date. This requirement shall not apply to mass-produced facilities which are purchased in completed form.
   b. The anticipated date of initial startup of an affected facility, postmarked not more than 60 days and not less than 30 days prior to such date.
   c. The actual date of initial startup of an affected facility, postmarked within 15 days after such date.

N. Annual Testing. NAC 445B.3679.3

Before the conclusion of each calendar year, ***the Permittee*** shall:

1. Conduct and record a Method 29 (or alternative test method approved by the Director) compliance test for mercury on the exhaust stack of **System 01** consisting of three valid runs. Each of the three test runs must collect a sample volume of 1.7 dry standard cubic meters (60 dscf) or be conducted for up to two hours in an effort to collect this sample volume (NAC 445B.3679.3).
2. Simultaneously, during the Method 29 (or alternative test method approved by the Director) compliance test, conduct and record a material assay from **System 01**. One representative sample shall be taken during each test run. Total mercury content shall be determined using EPA Method 7471B (cold vapor atomic adsorption analysis) (or alternative test method approved by the Director) (NAC 445B.3679.3).
3. Conduct tests of performance under such conditions as the Director specifies to the operator of the plant based on representative performance of the affected facility. The owner or operator shall make available to the Director such records as may be necessary to determine the conditions of the test of performance. Operations during periods of startup, shutdown and malfunction must not constitute representative conditions of a test of performance unless otherwise specified in the applicable standard (NAC 445B.252.3).
4. Give notice to the Director 30 days before the test of performance to allow the Director to have an observer present. A written testing procedure for the test of performance must be submitted to the Director at least 30 days before the test of performance to allow the Director to review the proposed testing procedures (NAC 445B.252.4).
5. Furnish the Director within 60 days after completing the performance tests a written and electronic report of the results of the performance tests. All information and analytical results of testing and sampling must be certified as to the truth and accuracy and as to their compliance with NAC 445B.001 to 445B.3689 (NAC 445B.252.8).

O. SIP Article 2.5.4 *(Federally Enforceable SIP Requirement)*

1. Breakdown or upset, determined by the Director to be unavoidable and not the result of careless or marginal operations, shall not be considered a violation of these regulations.

P. Expiration and Extension. NAC 445B.3687

1. If construction will occur in one phase, a mercury operating permit to construct for a new or modified thermal unit that emits mercury expires if construction is not commenced within 18 months after the date of issuance thereof or construction of the thermal unit that emits mercury is delayed for 18 months after initiated. The Director may extend the date on which the construction may be commenced upon a showing that the extension is justified.
2. If construction will occur in more than one phase, the projected date of the commencement of construction of each phase of construction must be approved by the Director. A mercury operating permit to construct expires if the initial phase of construction is not commenced within 18 months after the projected date of the commencement of construction approved by the Director. The Director may extend only the date on which the initial phase of construction may be commenced upon a showing that the extension is justified.

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Section I. General Conditions (continued)

Q. Nevada Mercury Control Program Implementation Requirements

1. The NvMACT for **TU4.001** must be implemented not later than 24 months after the issuance of this mercury operating permit to construct (NAC 445B.3679.3(a)(2)(I)).
   a. The issuance date for **TU4.004 – TU4.005** is **July 22, 2010**.
   b. The issuance date for **TU4.001** is month date year.
2. The Permittee shall provide the Director written notification of:
   a. The date of implementation of NvMACT for **TU4.001** each, pursuant to NAC 445B.3679.3(a)(2)(i) postmarked within 15 days after such date (NAC 445B.3679.2(g)).

R. Annual Reporting.

The Permittee shall:

1. Report mercury co-product on an annual basis (NAC 445B.3679(3)(d)).
2. Report the level of mercury emissions on an annual basis, which must be based on mercury emissions test data (NAC 445B.3679(3)(c)).

********** End of General Conditions **********

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Section II. Specific Operating Conditions

A. Thermal Unit # TU4.001 location North 4,493.08 km East 393.74 km, UTM (Zone 11)

A. System 01 – Carbon Kiln		
TU	4.001	Carbon Kiln

1. Air Pollution Equipment

a. Exhaust gases from **TU4.001** shall be ducted to a control system with 100% capture consisting of:
   i. **Wet Scrubber: (WS-001)** *(NvMACT add-on control)*
   ii. **Carbon Filter Bed: (CF-003)** *(NvMACT add-on control)*

b. Stack parameters
   i. Height: 42 feet
   ii. Diameter: 0.5 feet
   iii. Stack temperature: 110º F
   iv. Flow: Maximum volume flow rate of **2,000** dry standard cubic feet per minute (dscfm).

2. Operating Requirements

a. Limitations of operation. NAC 445B.3679.3
   i. The maximum allowable throughput rate of **strip circuit carbon** for **TU4.001** will not exceed **0.275** ton per any one-hour period.
   ii. Mercury emissions from **TU4.001** shall not exceed **1 x 10^{-4}** grains per dry standard cubic foot (gr/dscf).
   iii. Hours
   TU4.001 may operate a total of **8,760** hours per calendar year.

b. Work practices. (NAC 445B.3679.3)
   i. Wet Scrubber (**WS-001**)
      (a) The differential pressure drop across **WS-001** shall be determined during the first compliance test, pursuant to Section II.A.3.a., by measuring the low and high differential pressure values in inches of water during the compliance test. The differential pressure range shall be recorded and kept onsite.
      (b) The water flow rate for **WS-001** shall be determined during the first compliance test, pursuant to Section II.A.3.a., by measuring the water flow rate in gallons per minute during the compliance test. The water flow rate shall be recorded and kept onsite.

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Section II. Specific Operating Conditions (continued)

A. Thermal Unit # TU4.001 (continued)

ii. Carbon Filter Bed (**CF-003**)

(a) **CF-003** shall contain no less than **6,000** pounds of sulfur impregnated carbon.

(b) The differential pressure drop across **CF-003** shall be determined during the first compliance test, pursuant to Section II.A.3.a., by measuring the low and high differential pressure values in inches of water during the compliance test. The differential pressure range shall be recorded and kept onsite.

(c) Replace the sulfur-impregnated carbon according to the following schedule:

i. The sulfur-impregnated carbon in **CF-003** shall be sampled within 90 days after the notification of implementation of NvMACT operation for **TU4.001** as required in Section I.Q. above. The depth of the sample location shall be recorded. If more than one sample is taken, calculate an average carbon loading from the samples. Using this sample the percentage of mercury by weight shall be calculated. Sampling will continue quarterly, at the same sample depth location, until 50% of the 20% by weight of the carbon loading capacity, as specified by the manufacturer, is reached. Upon reaching 50% of the 20% by weight of the carbon loading capacity, sampling of the carbon will occur monthly until 90% of the 20% by weight of the carbon loading capacity is reached. The carbon will be replaced with an equivalent performing sulfur impregnated carbon no later than 30 days after reaching 90% of the 20% by weight of the carbon loading capacity. The required mercury analysis shall be performed utilizing one of the following methods:

1. EPA method 6020-Inductively Coupled Plasma-Mass Spectrometry;
2. EPA method 7471B- Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique); or
3. An alternative test method as approved by the Director.

(d) Any sulfur-impregnated carbon replaced in **CA-003** shall be replaced with only the original manufacturer's design specification sulfur-impregnated carbon or with equivalent or better performing carbon.

(e) The original manufacturer's design specifications for the sulfur impregnated carbon used in **CF-003** shall be kept on site.

3. Compliance Testing, Monitoring, Recordkeeping and Reporting (NAC 445B.3679.3)

a. Compliance Testing

Within 180 days of the implementation of NvMACT for **TU4.001** as required in Section I.Q., the Permittee shall conduct and record a performance test for mercury on the exhaust stack of **TU4.001** consisting of three valid runs utilizing US EPA Method 29 of 40 CFR part 60 Appendix A.

b. Monitoring

The ***Permittee*** shall:

i. Install, operate, calibrate, and maintain instrumentation to measure the following:
   (a) The water flow rate for **WS-001**, in gallons per minute.
   (b) The differential pressure across **WS-001**, in inches of water.
   (c) The differential pressure across **CF-003**, in inches of water.

ii. Monitor the hours of operation for **TU4.001** on a daily basis.

iii. Monitor the throughput rate of **strip circuit carbon** for **TU4.001** on a daily basis.

iv. Monitor the water flow rate for **WS-001** in gallons per minute once during each day of operation.

v. Monitor the differential pressure drop across **WS-001** in inches of water once during each day of operation.

vi. Monitor the differential pressure drop across **CF-003** in inches of water once during each day of operation of **TU4.001.**

vii. Monitor the sulfur-impregnated carbon in **CF-003** for percentage mercury by weight, quarterly until reaching 50% of the carbon loading capacity and then monthly until reaching 90% percent capacity.

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Section II. Specific Operating Conditions (continued)

A. Thermal Unit # TU4.001 (continued)

c. Recordkeeping

The required monitoring established in Section A.3.b.i. through Section A.3.b.vii. above will be maintained in a contemporaneous log containing, at a minimum, the following recordkeeping:

i. The calendar date of any required monitoring.
ii. The total daily hours of operation for the corresponding date.
iii. The total daily throughput rate of **strip circuit carbon** for the corresponding date.
iv. The water flow rate for **WS-001**, in gallons per minute, for the corresponding date.
v. The differential pressure drop across **WS-001**, in inches of water, for the corresponding date.
vi. The differential pressure drop across **CF-003**, in inches of water, for the corresponding date.
vii. The percentage of mercury by weight of the sulfur-impregnated carbon in **CF-003**.
viii. The depth of the sample location in **CF-003** from the mercury analysis, for the corresponding date.
ix. The date, time, and weight of each sulfur-impregnated carbon replacement for **CF-003**, for the corresponding date.

d. Reporting

Permittee will promptly report to the Director any deviations from the requirements of the Operating Permit to Construct. The report to the Director will include probable cause of all deviations and any action taken to correct deviations. For this Operating Permit to Construct, prompt of defined as submittal of a report within 15 days of the deviation. This definition does not alter any reporting requirements as established for reporting of excess emissions as required under NAC445B.232 and under condition I.L. of this permit.

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Section III. Amendments

This permit:

1. **Is non-transferable. (NAC 445B.287.3)**
2. **Will be posted conspicuously at or near the stationary source. (NAC 445B.318.5)**
3. **Any party aggrieved by the Department's decision to issue this permit may appeal to the State Environmental Commission (SEC) within ten days after the date of notice of the Department's action. (NRS 445B.340)**

Signature DRAFT

Issued by: Jonathan McRae, P.E.
Supervisor, Permitting Branch
Bureau of Air Pollution Control

Phone: (775) 687-9337 Date: _____

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06/13